## REMARKS

Claim 29 has been canceled. Claims 1, 17, 18, 28, 37, and 38 have been amended. Support for these amendments can be found at least in paragraphs 48 and 81 of the published application. No new matter has been added. Please enter the amendments and consider the following remarks prior to further examination.

Discussion of Claim objections

In the Office Action, Claim 28 is objected to as being of improper dependent form. Claim 28 has been amended, and is now independent. Accordingly, Applicant respectfully requests withdrawal of the objection.

Discussion of Rejections Under 35 U.S.C. § 102(b)

In the Office Action, Claims 17, 18, 32, and 33 are rejected under U.S.C. § 102(b) as being anticipated by Bell et al. (U.S. 4,819,195). Bell teaches a method of automatically calibrating a coordinate measuring machine (CMM).

Bell, however, does not disclose all of the features of Claims 17 and 18. For example, Bell does not teach a method of remotely evaluating or probing a physical object, where the method includes receiving a cloud of points from a remote location, wherein the cloud of points has been generated by measurement of said physical object and virtually represents said physical object. The method of Bell includes local measurement and manipulation of data. See Bell column 2 lines 31-47. Accordingly, Applicant respectfully submits that Claims 17 and 18 are patentable over Bell, and in condition for allowance. In addition, Applicant does not necessarily agree with the characterizations of Bell with respect to the dependent Claims 32 and 33, and respectfully submits that the dependent claims are in condition for allowance because of the features which they inherit from the independent claim from which they each depend and for their own features.

Discussion of Claims Rejected Under 35 U.S.C. § 103(a)

In the Office Action, Claims 1-16, 19-22, 28-31, and 34-38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto *et al.* (US 5,291,393) in view of Bell and Michiwaki (U.S. 6,012,022).

Applicant respectfully submits that the combination of Matsumoto, Bell and Michiwaki does not teach all of the features of Claim 1. For example, the combination does not teach a method of remotely evaluating a physical object, where the method includes receiving a numerical representation of the physical object from a remote computer, wherein said numerical representation has been generated by measurement of said physical object. Accordingly, Applicant respectfully submits that Claim 1 is in condition for allowance. Furthermore, Applicant respectfully submits that Claims 28, 37, and 38 are in condition for allowance for reasons similar to those discussed above regarding Claim 1. In addition, Applicant does not necessarily agree with the characterizations of the combination with respect to the dependent claims, and respectfully submits that the dependent claims are in condition for allowance because of the features which they inherit from the independent claim from which they each depend and for their own features.

In addition, Applicant respectfully submits that the present invention concerns the remote evaluation of an object, while the principal prior art document (Matsumoto *et al.*) is a machine tool apparatus that has the facility to produce an "NC work program" (a list of co-ordinates) based on a local evaluation. It is unlikely that the skilled person, starting from Matsumoto *et al.* would be motivated not only to adapt the majority of the steps disclosed therein, but also to change the fundamental purpose of that invention from a machining utility to a remote evaluation method. Furthermore, doubt must also be cast on the ability and motivation of the skilled person to combine a total of three documents in a routine and obvious way, and from different fields, given the vast quantity of options available in total. Moreover, none of the documents mention the main feature of the preamble to the claim, which is a method for *remote* evaluation of an object. This concept in itself is entirely new, regardless of the steps employed to achieve it.

Furthermore, the Office Action cites Matsumoto et al. at col. 7, lines 44 to 46, which discusses "NC macro commands." The macro commands described in Matsumoto, however, do not include instructions for equipment to perform an evaluation of a physical object. The macro commands of Matsumoto contain instructions to produce an "NC work program" (col. 8, lines 40 to 43) not to evaluate an object. The "NC work program" (e.g. Table 2) is merely a list of surface coordinates and is devoid of instructions to evaluate the object. Thus, Matsumoto et al. at col. 8, lines 35 to 45 discloses macro commands that contain instructions to generate an "NC work

program," which is quite unlike the evaluation macro of Claim 1, which has instructions for measurement equipment to perform an evaluation of the physical object. Matsumoto teaches that the "NC work program" is merely a list of surface co-ordinates of the object and could also not be considered an evaluation macro. The principal invention disclosed by Matsumoto et al. concerns a tooling apparatus, not a measurement device. As a consequence, the task of the NC work program is not to evaluate an object, but to machine a workpiece (see Matsumoto *et al.*, col. 2, lines 13 to 16).

Moreover, Applicant respectfully submits that the skilled person would not contemplate combining Matsumoto *et al.* with Bell *et al.* Bell *et al.* concerns the calibration of a CMM table, while Matsumoto *et al.*, is concerned with a tooling system. These are different principal inventions. Moreover, should, for the sake of argument, the "canned software" of Bell be considered a macro - which it is not - the skilled person would see no purpose or motivation for transferring it to the disclosures of Matsumoto *et al.* The addition of canned software for typical part features such as bores, or centre distances to Matsumoto *et al.* is incompatible with the machining utility of Matsumoto that does not require CMM functionality to the degree described in Bell *et al.* and which the canned software provides. In addition, there is no indication in Bell *et al.* that these features would achieve the goal of the present invention which is a remote evaluation.

Applicant respectfully submits that the combination does not teach generating an evaluation of said physical object by performing the instructions of said macro upon the numerical representation of the surface of said physical object. Bell teaches that software provides means for evaluating geometric tolerance for features and groups of features. See column 5, lines 34-39. However, Bell does not teach that the software operates on the numerical representation of the physical object, but rather teach that the evaluation is performed on the object as it is being measured. Column 2, lines 31-47 states:

> "The probe is moved, manually or under machine control, until contact is made with the desired part features. Reader heads, traveling on each axis along built-in axis measuring scales, transfer the instantaneous machine position through the digital display and to the computer interface. The dimensional and geometric

elements may be calculated, compared and evaluated, or stored or printed out as required." (emphasis added).

Consequently, the dimensional and geometric elements may be evaluated or stored, but there is no teaching that they are stored and then evaluated. Therefore, Applicant respectfully submits that Bell does not teach generating an evaluation of said physical object by performing the instructions of said macro upon the numerical representation of the surface of said physical object.

Some embodiments of the method of Claim 1 perform a remote evaluation of an object using an evaluation macro without the need for the presence of the object or measuring device (See present application, paragraphs 75 and 76). For example, a machined object, such as a turbine blade that has been manufactured in the USA can be evaluated by the purchaser in the UK without shipping the part itself to the UK. The purchaser is able to use the method to look for abnormalities using his own macros. This avoids the expense of shipping the part to the UK. It also obviates further shipping for corrective machining, since the UK purchaser can inform the manufacturer electronically of adjustments. The method therefore, reduces shipping costs, time, reduces damage the object caused by shipping.

There is no mention of remote evaluation in any of Matsumoto *et al.*, Bell *et al.*, or Michiwaki. In addition, all require the presence of the physical part, a measurement device, and measurement and any evaluation to be performed simultaneously. Consequently, Applicant respectfully submits that Claim 1 is not obvious in view of Matsumoto *et al.*, Bell *et al.*, and Michiwaki.

Additionally, Applicant respectfully submits that the skilled person faced with adapting Matsumoto *et al.*, which has already been adapted by Bell *et al*, would be confronted with such a large number of possibilities, that he would not, without hindsight, be guided to all of the features of Claim 1. Applicant respectfully submits that the Examiner has made an inappropriate *ex post facto* analysis by assuming that the skilled person is readily able to select, without guidance, the correct features where they exist, and combine them in an exact manner with disclosures of the further two documents. The task is rendered more difficult by the absence of any guidance, since nowhere in the cited documents is the notion of remote evaluation given.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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